Customer No.: 31561
Application No.: 10/708,016
Docket No.: 12030-US-PA

REMARKS

Present Status of the Application

A new title that is clearly indicative of the invention to which the claims are directed is required. In addition, claims 6-8 are objected to because some appropriate corrections are required. The Office Action rejected 1-3 and 12. Specifically, the Office Action rejected claim 1 under 35 U.S.C. 102(b), as being anticipated by Matsushima (U.S. 5,917,563). The Office Action rejected claims 1 and 12 under 35 U.S.C. 102(b), as being anticipated by Zhang (U.S. 6,115,088). The Office Action also rejected claims 2 and 3 under 35 U.S.C. 103(a) as being unpatentable over Matsushima in view of Takahara (U.S. 5,673,127). Moreover, claims 6, 7 and 9 would be allowable if written in independent form including all of the limitations of the base claim and any intervening claims.

Applicant has amended the title and claims 6-8 to overcome the objection. Applicant has also amended claim 1. After entry of the foregoing amendments, claims 1-3, 6-9 and 12 remain pending in the present application, and reconsideration of those claims is respectfully requested.

Discussion of Office Action Objections

The title of the application is amended to "PIXEL STRUCTURE HAVING ELECTRICAL FIELD SHIELDING LAYER" that is clearly indicative of the invention to which the claims are directed.

In claim 6, "disposed between the capacitor electrode and the pixel electrode" is amended to "with the capacitor electrode disposed between the transparent capacitor electrode and the pixel electrode".

In claim 7, "the active element is directly electrically coupled to the capacitor electrode or the transparent capacitor electrode" is amended to "the active element is directly electrically coupled to the transparent capacitor electrode".

In claim 8, "the active element is electrically coupled to the capacitor or the transparent capacitor electrode through the pixel electrode" is amended to "the active element is electrically coupled to the transparent capacitor electrode through the pixel electrode".

Discussion of Office Action Rejections

Applicant respectfully traverses the 102(b) rejection of claim 1 because Matsushima (U.S. 5,917,563) does not teach every element recited in the claim.

In order to properly anticipate Applicants' claimed invention under 35 U.S.C 102, each and every element of claim in issue must be found, "either expressly or inherently described, in a single prior art reference". "The identical invention must be shown in as complete details as is contained in the .... claim. Richardson v. Suzuki Motor Co., 868 F. 2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989)." See M.P.E.P. 2131, 8th ed., 2001.

The present invention is in general related a pixel structure as claim 1 recites:

Claim 1. A pixel structure, adapted to be disposed on a substrate, comprising:
a scan line, disposed on the substrate;
a data line, disposed on the substrate;

an active element, disposed near to an intersection of the scan line and the data line on the substrate, and electrically coupled to the scan line and the data line;

a pixel electrode, disposed over the substrate and electrically coupled to the active element;

an electrical field shielding layer, disposed between the data line and the pixel electrode; and

a capacitor electrode, disposed between the substrate and the pixel electrode, and the capacitor electrode does not cover the data line and the scan line.

Matsushima fails to teach or suggest that ***an electrical field shielding layer is disposed between the data line and the pixel electrode and a capacitor electrode is disposed between the substrate and the pixel electrode, and the capacitor electrode does not cover the data line and the scan line.*** The capacity common wiring 26A in Matsushima's reference is formed over the data line 20 and the TFT (including the gate 16a and the active layer 11), as shown in Fig. 2 and Fig. 4. The capacity common wiring 26A in Matsushima's reference can also be formed over the scan line 16 and the TFT, as shown in Fig. 1 and Fig. 4. However, in claim 1 of the present invention, the capacitor electrode is formed under the pixel electrode but does not cover the data line and the scan line, and an electrical field shielding layer is further disposed between the pixel electrode and the data line. Hence, Matsushima fails to disclose the capacitor electrode and the electrical field shielding layer as claims 1 recited, and thus Matsushima does not teach every element of claim 1.

Applicant respectfully traverses the 102(b) rejection of claims 1, 12 because Zhang (U.S. 6,115,088) does not teach every element recited in these claims.

Zhang also fails to teach or suggest ***an electrical field shielding layer is disposed between the data line and the pixel electrode***, and ***a capacitor electrode*** is disposed between the substrate and the pixel electrode, and ***the capacitor electrode does not cover the data line and the scan line.*** In Zhang's reference, the capacitor electrode 106 is formed over the source line 105 and the gate line 104, as Fig. 1 and Fig. 10 shown. The electrode pattern 106 is latticed when seen from the point of view of the whole active matrix region (col. 3, lines 30-34). However, in claim 1 of the present invention, the capacitor electrode is formed under the pixel electrode but does not cover the data line and the scan line, and an electrical field shielding layer is further disposed between the data line and the pixel electrode. Hence, Zhang fails to disclose the capacitor electrode and the electrical field shielding layer as claims 1 recited, and thus Zhang does not teach every element of claim 1.

For at least the foregoing reasons, Applicant respectfully submits that independent claim 1 patently defines over the prior art reference, and should be allowed. For at least the same reasons, dependent claim 12 patently defines over the prior art as well.

Applicant respectfully traverses the rejection of claims 2 and 3 under 103(a) as being unpatentable over Matsushima in view of Takahara (U.S. 5,673,127) because a prima facie case of obviousness has not been established by the Office Action.

To establish a prima facie case of obviousness under 35 U.S.C. 103(a), each of three requirements must be met. First, the reference or references, taken alone or combined, must

teach or suggest each and every element in the claims. Second, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skilled in the art, to combine the references in a manner resulting in the claimed invention. Third, a reasonable expectation of success must exist. Moreover, each of the three requirements must " be found in the prior art, and not be based on applicant's disclosure." See M.P.E.P. 2143, 8th ed., February 2003.

Applicant submits that, as disclosed above, Matsushima fails to teach or suggest each and every element of claim 1 from which claims 2-3 depend. Takahara also fails to teach an electrical field shielding layer is disposed between the data line and the pixel electrode, and a capacitor electrode is disposed between the substrate and the pixel electrode, and the capacitor electrode does not cover the data line and the scan line. Takahara cannot cure the deficiencies of Matsushima. Therefore, independent claim 1 is patentable over Matsushima and Takahara. For at the least the same reasons, its dependent claim 2-3 are also be patentable as a matter of law.

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CONCLUSION

For at least the foregoing reasons, it is believed that the pending claims are in proper condition for allowance. If the Examiner believes that a telephone conference would expedite the examination of the above-identified patent application, the Examiner is invited to call the undersigned.

Respectfully submitted,

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Belinda Lee

Belinda Lee
Registration No.: 46,863

Jianq Chyun Intellectual Property Office
7th Floor-1, No. 100
Roosevelt Road, Section 2
Taipei, 100
Taiwan
Tel: 011-886-2-2369-2800
Fax: 011-886-2-2369-7233
Email: belinda@jcipgroup.com.tw
Usa@jcipgroup.com.tw